

WHAT IS CLAIMED IS:

SUB A' >

1. A data network comprising:
 2 a sending node;
 3 a receiving node coupled to receive a plurality of data information packets
 4 from the sending node; and
 5 at least a first and second transmission channel coupled to the sending and
 6 receiving nodes, wherein each data information packet transmitted
 7 across the network is selected for transmission on one of the first and
 8 second transmission channels according to predetermined criteria.

2. The data network of claim 1 wherein the first and second transmission
 channels are, respectively, a low latency channel for transmitting data packets
 meeting a low latency criteria, and a high bandwidth channel for transmitting data
 packets meeting a high bandwidth criteria.

3. The data network of claim 2 wherein information relating to
 scheduling of the high bandwidth channel is transmitted over the low latency channel.

4. The data network recited in claim 1 wherein one of the first and second
 transmission channels is coupled to transmit control information relating to network
 protocol according to the predetermined criteria.

SUB A' >

5. The data network recited in claim 1 wherein the predetermined criteria
 includes at least one selected from the set of a size of a data information packet, a type
 of operation associated with the data information packet, a latency budget for the data
 information packet, security needs of the data information packet and reliability needs
 of the data information packet.

6. The data network recited in claim 5, wherein a software program
 allocates the data information packet to one of the transmission channels according to
 at least one of the predetermined criteria.

1 21. The data network as recited in claim 1 wherein at least one of the first
2 and second transmission channels have characteristics facilitating transfer based on
3 the predetermined criteria, the predetermined criteria including at least one of low
4 latency, high bandwidth, security and reliability.

1 22. A method for transmitting data traffic between at least a first and
2 second node in a network having at least a first and second transmission channel, the
3 method comprising:

4 organizing the data traffic prior to transmission across the network into at least
5 a first and second group according to predetermined criteria; and
6 transmitting the first group of the data traffic over the first transmission
7 channel and the second group of the data traffic over the second
8 transmission channel.

1 23. The method recited in claim 22 wherein the first and second
2 transmission channels are independent.

1 24. The method recited in claim 22 further comprising:
2 transmitting control information relating to network protocol over one of the
3 first and second transmission channels along with one of the first and
4 second groups of data traffic.

1 25. The method recited in claim 24 wherein the first and second
2 transmission channels are respectively a high bandwidth channel and a low latency
3 channel, and wherein the first group of data traffic is transmitted over the low latency
4 channel, the low latency channel for transmitting data packets meeting a low latency
5 criteria; and wherein the second group of data traffic is transmitted over the a high
6 bandwidth channel, the high bandwidth channel for transmitting data packets meeting
7 a high bandwidth criteria.

1 26. The method recited in claim 25 further comprising:
2 scheduling transmittal of data traffic across the high bandwidth channel using
3 control information transmitted over the low latency channel.

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2 27. The method recited in claim 26 further comprising:
3 transferring the control information across the low latency channel with a
higher priority than the first group of data traffic transferred across the

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1 34. The apparatus recited in claim 33 further comprising:
2 means for transmitting the control information across one of the transmission
3 channels.

1 35. The apparatus recited in claim 33 further comprising:
2 means for transmitting the first group of the data traffic having low latency
3 characteristics; and
4 means for transmitting the second group of the data traffic having high
5 bandwidth characteristics.

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